

Thursday, June 16, 2011 11:56:21 AM

Item ID: D3183-045



Stop

[illegible]

<p>1. The first step in the process of identifying a problem is to define the problem. This involves identifying the symptoms and the underlying causes of the problem.</p> <p>2. The second step is to gather information about the problem. This involves collecting data and identifying the stakeholders who are affected by the problem.</p> <p>3. The third step is to analyze the information. This involves identifying the key issues and the potential solutions to the problem.</p> <p>4. The fourth step is to develop a plan of action. This involves identifying the steps that need to be taken to solve the problem and the resources that will be needed.</p> <p>5. The fifth step is to implement the plan. This involves putting the plan into action and monitoring the progress of the solution.</p> <p>6. The sixth step is to evaluate the results. This involves assessing the effectiveness of the solution and identifying any areas for improvement.</p>	<p>1. The first step in the process of identifying a problem is to define the problem. This involves identifying the symptoms and the underlying causes of the problem.</p> <p>2. The second step is to gather information about the problem. This involves collecting data and identifying the stakeholders who are affected by the problem.</p> <p>3. The third step is to analyze the information. This involves identifying the key issues and the potential solutions to the problem.</p> <p>4. The fourth step is to develop a plan of action. This involves identifying the steps that need to be taken to solve the problem and the resources that will be needed.</p> <p>5. The fifth step is to implement the plan. This involves putting the plan into action and monitoring the progress of the solution.</p> <p>6. The sixth step is to evaluate the results. This involves assessing the effectiveness of the solution and identifying any areas for improvement.</p>
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Cust Item ID:

Customer:

Run Start

[illegible]

Date: Feb 13

Date:

Stop

[illegible]

Date:

Date:

**Insp.
Stamp**

Revision Nbr

Rev C1

0.00

SECRET

Hardinge CNC LATHE SMALL

Hardinge

Memo

0.00

Hardinge CNC Lathe Small

Turn D3183-9 Cap as per Folio FA388□Deburr

110

QC2- Inspect parts off machine FAI/FAIB

0.00

[illegible]

Memo

0.00

QC

Quality Control

120

QC8- Inspect parts - second check

0.00



Memo

0.00

QC

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 70865

Thursday, June 16, 2011 11:56:22 AM



Page 2

Item ID: D3183-045

Accept



Setup Start



Revision ID:

Stop



Item Name: Bearing Assembly

Start Date: 6/16/2011 Start Qty: 30.00



Cust Item ID:

Required Date: 6/23/2011 Req'd Qty: 30.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130



Small Fab

Small Fab

0.00

Memo

0.00

Small Fab

Press D3183-5 Bearing into D3183-9 Cap as per Dwg D3183.

JB 6/16/23 (30)

140



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8 wloc124

wento
(x30)

150



Packaging

Packaging

Identify as per dwg & Stock Location: ST236

0.00

Memo

0.00

JB (30) 6/16/24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____






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NOTE: Date & initial all entries


Work Order ID 70865

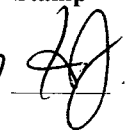
Page 3

Thursday, June 16, 2011 11:56:22 AM

Item ID: D3183-045 **Accept**  **Setup Start** 
Revision ID:
Item Name: Bearing Assembly **Stop** 
Start Date: 6/16/2011 **Start Qty:** 30.00  **Cust Item ID:**
Required Date: 6/23/2011 **Req'd Qty:** 30.00  **Customer:**
Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start** 
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 	QC21- Final Inspection - Work Order Release	0.00							
QC Quality Control	Memo	0.00							

11/6/27 
MF
11-06-24

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, June 16, 2011 11:56:32 AM

Page 1

Work Order ID: 70865

Parent Item: D3183-045

Parent Item Name: Bearing Assembly

Start Date: 6/16/2011

Required Date: 6/23/2011

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP A 04.02.18 New issue KJ/DS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3183-5		Manufactured	No			110	Each	7.0000	1	30			
---------	--	--------------	----	--	--	-----	------	--------	---	----	--	--	--



Bearing

Location

Loc Qty

Loc Code

ST236

7

67529

1

68933

6

MDELRINR1.000

Purchased

No

130

f

6.8000

0.0333

1.051579



Delrin Round Bar 1"

Location

Loc Qty

Loc Code

MAT055

6.8

117985

6.8

EP 11/06/23
B70891 (30x)

SL 1.16123

1.2 dt

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

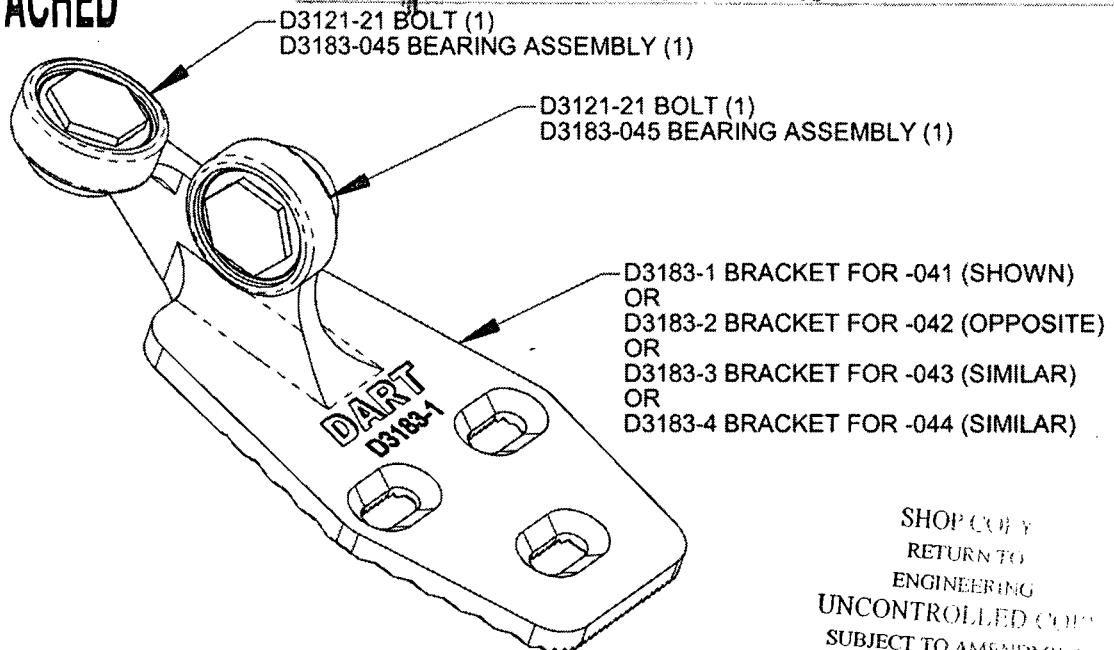
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



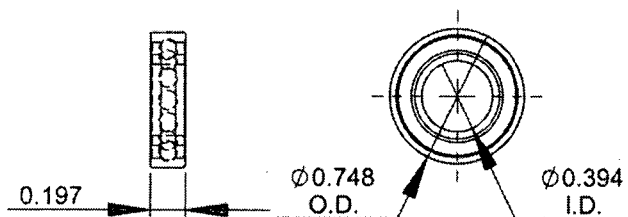
DESIGN #	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3183	REV. C SHEET 1 OF 4
DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:1
A	03.01.24	NEW ISSUE	
B	03.06.17	REMOVE BEARING; 1.012 WS 0.882	
C	04.02.17	ADD -045/-9; 0.182 WAS 0.431	
CI	04.11.09	0.830 WAS 0.850	

RELEASED
04.03.01
DEO ATTACHED



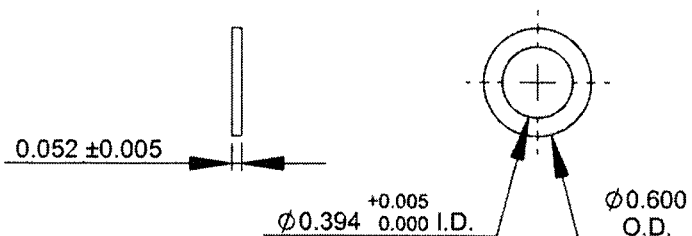
D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR)
D3183-044 BRACKET ASSEMBLY (SIMILAR)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 70865
11-06-16



D3183-5 BEARING:
SPECIFICATION CONTROL DRAWING

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

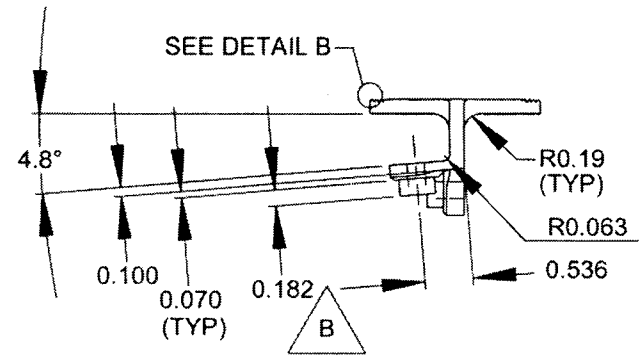
NOTE: Date & initial all entries

W/O 708e5

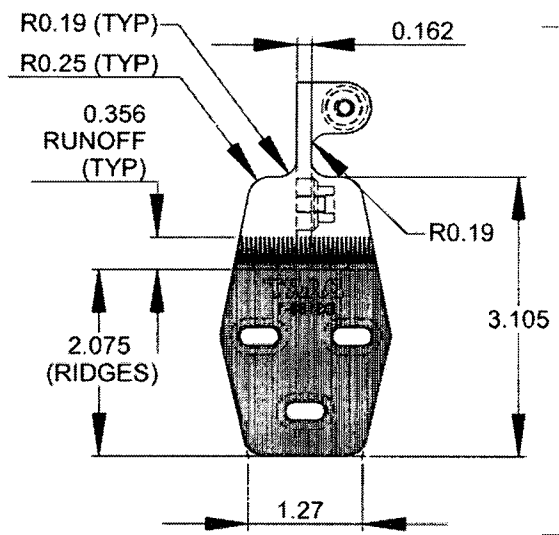
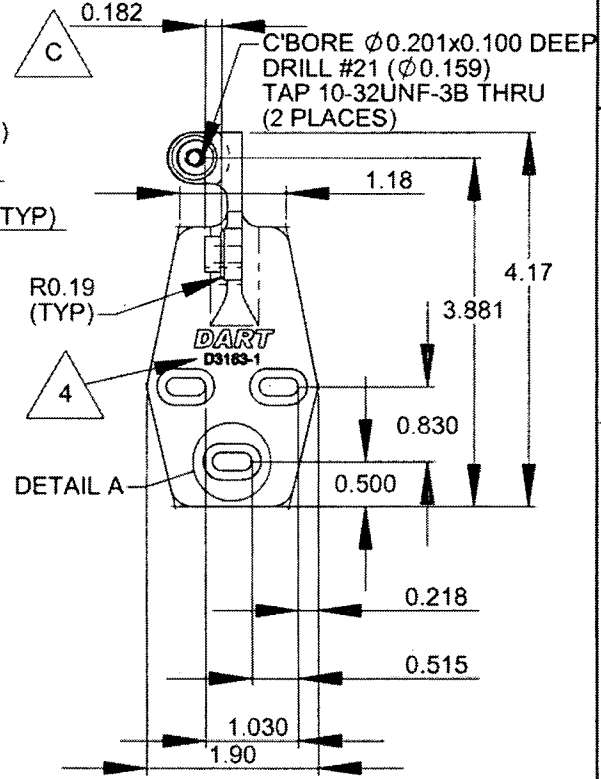
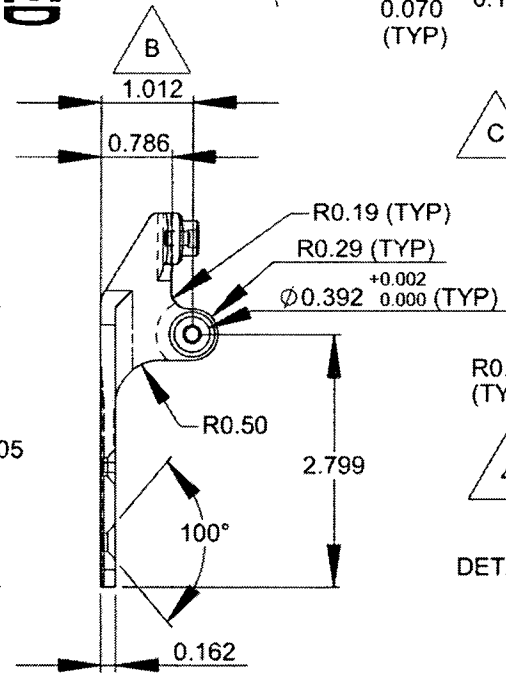


DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	DRAWING NO.	REV. C
04.02.17	D3183	SHEET 2 OF 4
TITLE	BRACKET ASSEMBLY	SCALE
		1:2

RELEASED



DEO ATTACHED



D3183-1 BRACKET SHOWN
D3183-2 BRACKET OPPOSITE

- 1) D3183-1 CAN BE MADE FROM D3183-3
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

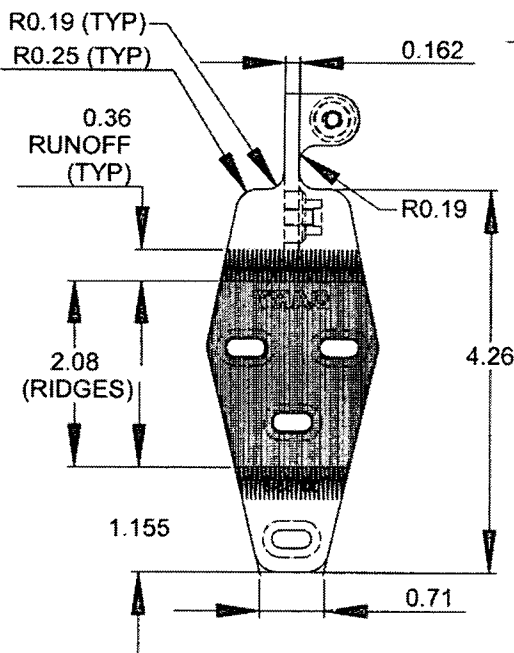
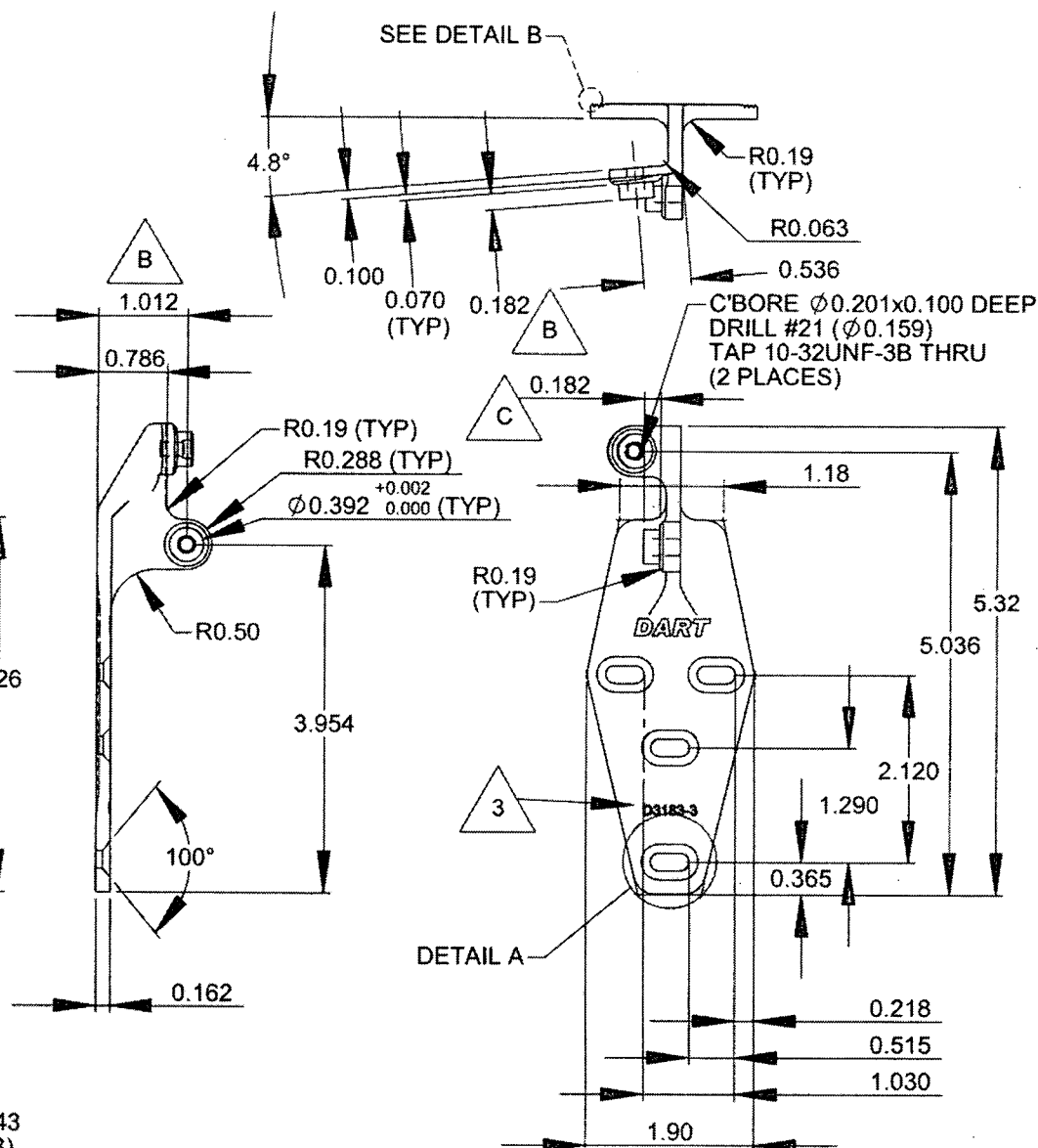
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

460 70865



DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	DRAWING NO.	REV. C
04.02.17	D3183	SHEET 3 OF 4
TITLE	BRACKET ASSEMBLY	SCALE
		1:2



D3183-3 BRACKET SHOWN
(REPLACES BELL P/N 412-030-304-105)
D3183-4 BRACKET OPPOSITE
(REPLACES BELL P/N 412-030-304-106)

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

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DEO ATTACHED
RELEASED
24 03 01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

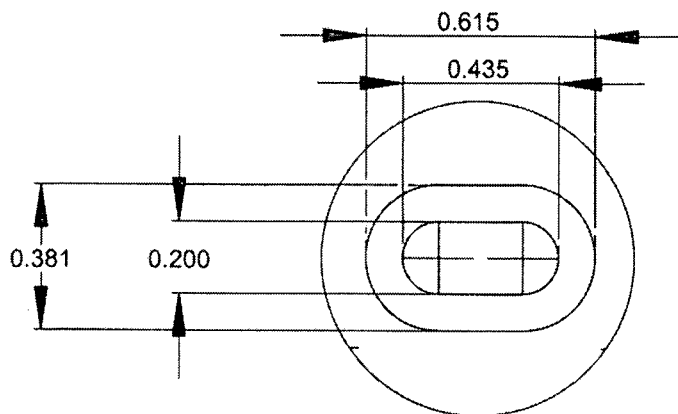
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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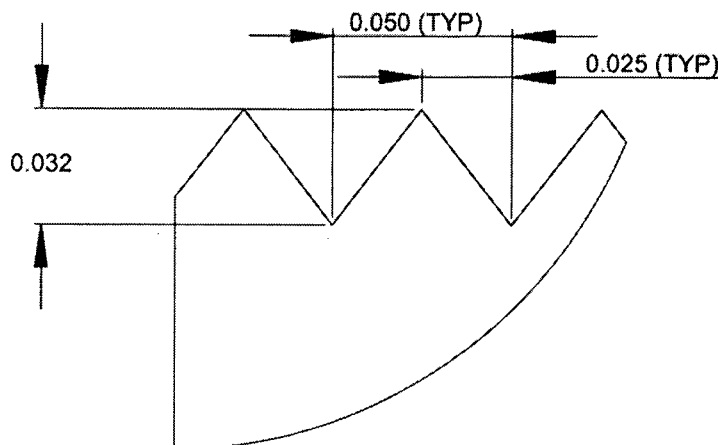
DESIGN #	DRAWN BY UP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3183	REV. C SHEET 4 OF 4
DATE 04.02.17	TITLE BRACKET ASSEMBLY		SCALE 1:1



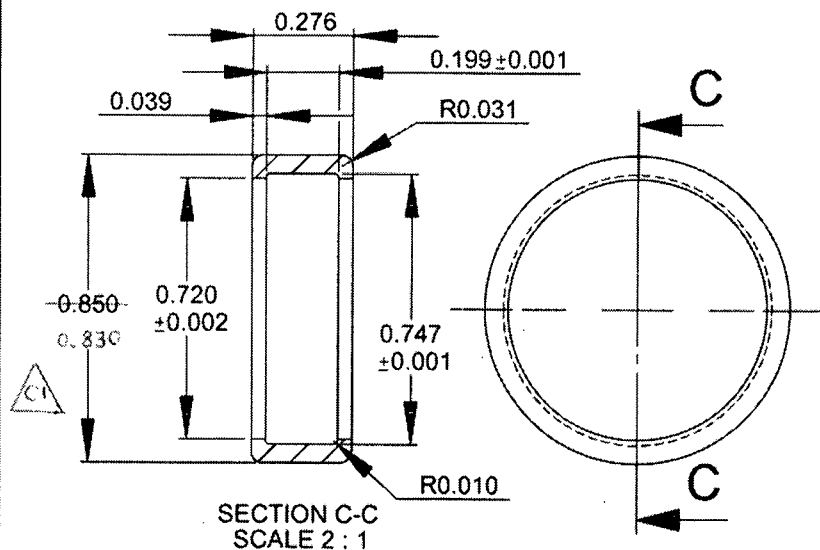
DETAIL A (2 : 1)

RELEASED
04.03.01

DEO ATTACHED



DETAIL B (20 : 1)



D3183-9 CAP

- 1) MATERIAL: DELRIN ROD, Ø1.00
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

- 1) ASSEMBLE D3183-5 BEARING AND
D3183-9 CAP

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3183	TITLE BRACKET ASSEMBLY	REV.C1	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D3183-C1-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>q</i>	CHECKED <i>J</i>	MFG. APPR. <i>A</i>	APPROVED <i>MP</i>		DE APPR. <i>MP</i>		
DATE 10.05.14	DATE 10.06.30	DATE 10.06.30	DATE 10/06/30		DATE 10/06/30		

D3183-5 BEARING

ADD POSSIBLE SUPPLIER: KML P/N 6800-ZZ

BASIC LOAD RATING REQUIREMENT: Cr = 1720 N (386 lb) MIN [DYNAMIC]
Cor = 840 N (188 lb) MIN [STATIC]

REF PAR 10-012

W/O 10865.

RELEASED
2010-07-22
MP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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